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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,868	11/15/2000	Masataka Ide	OOCL-46-(6MN-00S0996)	3778

7590

12/20/2002

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EXAMINER

HARRINGTON, ALICIA M

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 12/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 09/712,868

Inventor(s) IDE ET AL.

Examiner

Alicia M Harrington

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 15-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION***Election/Restrictions***

Applicant's election of claims 1-13 in Paper No. 6 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

The MPEP in section 202.1 discloses the specification in the first sentence after the title should include reference to applications or publications the applicant is claiming priority or continuity information as stated below:

202.01 In Specification

37 CFR 1.78. Claiming benefit of earlier filing date and cross references to other applications.

(a)(1) A nonprovisional application may claim an invention disclosed in one or more prior filed copending nonprovisional applications or copending international applications designating the United States of America. In order for a nonprovisional application to claim the benefit of a prior filed copending nonprovisional application or copending international application designating the United States of America, each prior application must name as an inventor at least one inventor named in the later filed nonprovisional application and disclose the named inventor's invention claimed in at least one claim of the later filed nonprovisional application in the manner provided by the first paragraph of 35 U.S.C. 112. In addition, each prior application must be:

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- (i) An international application entitled to a filing date in accordance with PCT Article 11 and designating the United States of America; or
 - (ii) Complete as set forth in § 1.51(b); or
 - (iii) Entitled to a filing date as set forth in § 1.53(b) or § 1.53(d) and include the basic filing fee set forth in § 1.16; or
 - (iv) Entitled to a filing date as set forth in § 1.53(b) and have paid therein the processing and retention fee set forth in § 1.21(l) within the time period set forth in § 1.53(f).
- (2) Except for a continued prosecution application filed under § 1.53(d), any nonprovisional application claiming the benefit of one or more prior filed copending nonprovisional applications or international applications designating the United States of America must contain a reference to each such prior application, identifying it by application number (consisting of the series code and serial number) or international application number and international filing date and indicating the relationship of the applications. This reference must be submitted during the pendency of the application, and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. This time period is not extendable. Unless the reference required by this paragraph is included in an application data sheet (§ 1.76), the specification must contain or be amended to contain such reference in the first sentence following the title. If the application claims the benefit of an international application, the first sentence of the specification must include an indication of whether the international application was published under PCT Article 21(2) in English (regardless of whether benefit for such application is claimed in the application data sheet).

However, incorporation by reference is improper. As stated below:

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The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

Claim Objections

Claims 1,4, 5, 6, 7, 8, and 12 are objected to because of the following informalities: Each claims contains the phrase “pick upping” in the details of the image sensor . Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 6-8,12-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Kindaichi (US 6,434,332).

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Regarding claims 6-8,12 Kindaichi discloses a distance measuring device comprising a distance measuring optical system; area sensor (which includes/is equivalent to an image pickup, photographic sensor; or photographic element) processing circuit, main subject detecting means, setting means and distance measuring means (see figure 1; col. 6,lines 15-25 and 55-67;col. 20, lines 1-30.

Regarding claim 13,Kindaichi discloses the pixel area sensor that is driven by horizontal and vertical control for outputting image data that is amplified under the control of the controller (see col. 6, lines 15-57). And the integration of all these circuits into a silicon substrate by a CMOS process is implicit from the disclosure.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,4,9,10 rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa (US 5,285,234) in view of Aoyama (US 6,088,539)

Regarding claims 1,4,9 and 10, Hasegawa discloses a distance measuring device used in a camera comprising two optical systems (11, 12; see figures 1,2, and 5); an image pickup element (col. 2, lines 54-57;col. 5, lines 37-63); image processing means (correlator 24&29; see figure 5, col. 6, lines 65-69); main subject detection (col. 2,lines 20-25) and distance measuring (col. 6, lines 59-64). Hasegawa system correlates for several locations in image and the user selects one of the subjects to be the main subject for distance detecting. Thus, Hasegawa fails to disclose an

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embodiment where the main subject is detected on the basis of an output from the processing.

Although, it is well known in the art, as taught by Aoyama.

In the same field of endeavor, Aoyama discloses processing an output from an image pick up unit and determining the main subject based on this information. Then, the system performs distance measuring based on the main subject (see col. 4, lines 35-46; col. 6, lines 30-40 and 55-65; col. 7, lines 1-5). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hasegawa, as taught by Aoyama to automate the distance measuring system rather than having the user to constantly select the image.

Further, Hasegawa processing and image pick up are not on the same substrate. Aoyama is silent as to whether all the system is on the same substrate. However, the Examiner takes official notice that an obvious progression in image processing using semiconductor is to incorporate processing on the same chip/substrate as the imager to provide less noise in the processing and it makes the circuit more compact. And it has been held that what were once two articles and now forms one article would be within routine skill in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide image processing on the substrate as image pickup, since it provides for a more device and would have been with routine skill in the art.

Claims 5,6,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabata (US 6,370,262)

Regarding claims 5, 6,10 Kawabata discloses a distance measuring device comprising a distance measuring optical system (1, 2); area sensors 934; col. 4, lines 40-45); a processing circuit (see

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figures 2a-2e; 7-19) for creating outline data on the subject; a control circuit(see col. 11, lines 48-67). However, Kawabata fails to specifically disclose the single area sensor for picking up two images and the image processor is formed on the same substrate as the image pick up element. Although, it is notoriously well known to detect to images focused by a dividing optical system on single area sensor substrate, and the Examiner takes official notice to this fact. Further, the Examiner takes official notice that an obvious progression in image processing using semiconductor is to incorporate processing on the same chip/substrate as the imager to provide less noise in the processing and it makes the circuit more compact. And it has been held that what were once two articles and now forms one article would be within routine skill in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide image processing on the substrate as image pickup, since it provides for a more device and would have been with routine skill in the art.

Claims 1-3,10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchiyama(US 5,572,282).

Regarding claims 1 and 2, Uchiyama discloses an focus detecting device comprising two optical systems having parallax(see figure 9); image pick up element(41); image processing (51; col. 7,line s5-15;col. 8,lines 5-30); main subject detection (col. 6,lines 50-67; col. 10, lines 40-67) and distance measuring. The processor filters the image to determine high and low frequencies of subject. Then the system drives the object lens to focus. However, Uchiyama fails to specifically disclose an image pickup element and image processor is formed on the same semiconductor substrate. However, the Examiner takes official notice that an obvious progression in image

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processing using semiconductor is to incorporate the processing on the same chip/substrate as the imager to provide less noise in the processing and it makes the circuit more compact. And it has been held that what were once two articles and now forms one article would be within routine skill in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide image processing on the substrate as image pickup, since it provides for a more device and would have been with routine skill in the art.

Regarding claim 10, Uchiyama (US 5,572,282) discloses a focus-detecting device comprising two optical systems having parallax (see figure 9); photographic element (41); image processing (50-51; col. 7, line 5-15; col. 8, lines 5-30); main subject detection (col. 6, lines 50-67; col. 10, lines 40-67) and distance measuring. The processor filters the image to determine high and low frequencies of subject. Then drives the object lens to focus. However, Uchiyama fails to specifically disclose an image pickup element and image processor is formed on the same semiconductor substrate. However, the Examiner takes official notice that an obvious progression in image processing using semiconductor is to incorporate processing on the same chip/substrate as the imager to provide less noise in the processing and it makes the circuit more compact. And it has been held that what were once two articles and now forms one article would be within routine skill in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide image processing on the substrate as image pickup, since it provides for a more device and would have been with routine skill in the art.

Regarding claims 3 and 11, the processing means (50) has a small block and large block mode. Further, as displayed in figure 1, it can individually set an output to the main subject detecting means and distance measuring means.

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Allowable Subject Matter

Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Regarding claim 14, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which includes extracting only a column at which the amount of image distance measurement is changes, detecting, simultaneously and in parallel manner, pieces of outline data each corresponding to one scanning line as claimed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nonaka (US 6,308,014) discloses ranging apparatus installed in a camera;

Nonaka (US 6,430,370) discloses a distance measuring apparatus and method for a camera.

Lee et al (US 5,995,767) discloses a method for controlling focusing areas of a camera and an apparatus for performing the same.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M Harrington whose telephone number is 703 308 9295. The examiner can normally be reached on Monday - Thursday 9:30-6:00.

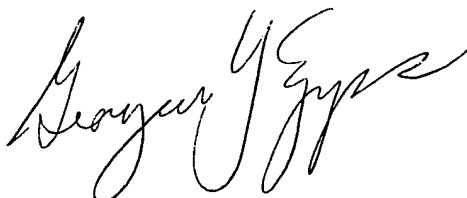
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 703 308 4883. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308 7724 for regular communications and 703 308 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

Alicia M Harrington
Examiner
Art Unit 2873

AMH 
December 16, 2002


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800